

File No. 712(II)

Collection No.

19 31.

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25/6/47

Mysore Residency

Bangalore.



Pros. Nos. 1-7  
Serial

**Subject.**

Collection of information as to the prevalence of  
Malaria and the requirements of quinine.

**Previous References.**

F.No.295 of 1930.

**Later References.**

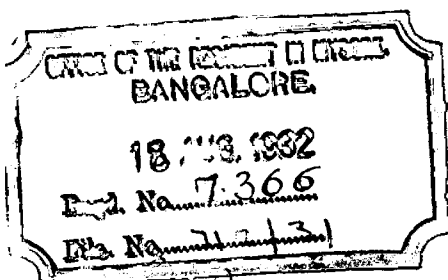
From

The Under Secretary to the Government of India  
in the Foreign and Political Department,

To

The Hon'ble the Resident at Hyderabad,  
The Hon'ble the Resident in Mysore, ✓  
The Hon'ble the Agent to the Governor General in  
Central India,  
The Hon'ble the Agent to the Governor General in  
Rajputana,  
The Hon'ble the Agent to the Governor General and  
Chief Commissioner in Baluchistan,  
The Political Officer in Sikkim,  
The Agent to the Governor General, Madras States,

Dated Simla, the 8<sup>th</sup> August 1932.



Collection of information as to the  
prevalence of malaria and the  
requirements of quinine.  
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Sir,

I am directed to forward a copy of the papers noted

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- |                                                                                                     |               |
|-----------------------------------------------------------------------------------------------------|---------------|
| 1. Letter from the India Office, No.E. and O.422/31,<br>dated the 29th January 1931, with enclosure | in the margin |
| 2. Letter from the India Office, No.E.&O.4147/32,<br>dated the 15th June 1932, with enclosure.      | and to        |
- 

request that

the Government of India may be supplied as expeditiously  
as possible with such information as can be furnished on  
the points mentioned in the letter from the Medical  
Director League of Nations, dated the 14th January 1931.

I have the honour to be,

Sir,

Your most obedient servant,

Under Secretary to the Government of India.

E.&.O.422/31.

INDIA OFFICE,  
WHITEHALL,  
LONDON, S.W.1.

29th January 1931.

League of Nations.  
Malaria. Collection of information  
as to the requirements of quinine.

Sir,

I am directed by the Secretary of State for India in Council to forward, for information and for such action as may be possible, two copies of the papers noted below.

I am, Sir,

Your obedient Servant,

Sd. E.P. Donaldson.

for Secretary,

Economic and Overseas Department.

M.L.19.1930.III. Letter from the Medical Director,  
League of Nations dated 14th Jany.  
1931.

The Secretary to the Government of India,  
Legislative Department.

-----  
True Copy.

*B. Sen Gupta*  
Superintendent, Issue Branch.  
Foreign and Political Department.

SOCIETE DES NATIONS.

LEAGUE OF NATIONS,

Geneva, January 14th, 1931.

Sir,

After a careful study of the information collected on the epidemiology of malaria and on the various methods of control applied, the Malaria Commission of the League of Nations, emphasized (in Cf.Docts.CH/Malaria/73 and 121) the importance of treatment in the anti-malaria campaign:

"The Commission considers that the first duty of administrations which have to organise anti-malaria measures, is to provide for the treatment of the malarious sick with the additional object of reducing sources of infection." (CH/Malaria/121).

For this purpose quinine should be available to each patient suffering from malaria, this drug constituting the primary weapon of attack in an anti-malaria campaign.

Further in these documents, the high price and inadequate supply of quinine are shown to be serious obstacles to its wider employment in the treatment of malaria.

As far as is known, there are few malarious countries, and these only the producing countries, (Italy, Dutch East Indies, for example) where the amount of quinine used has been increased during the last ten years, by means of improved registration of infected persons, careful education and a more consistent treatment.

During its session held in March 1924, the Health Committee on the proposal of the Government of Yugoslavia decided on a programme of preliminary studies of this subject to be undertaken by a certain number of experts.

The following items were included:

- (a) the world requirements of quinine.
  - production and methods of increasing it,
  - increase of cultivation,
  - cost of production and sale price,
  - State distribution or private sale.
- (b) Study of secondary alkaloids.

A study of secondary alkaloids and quinetums, and also  
of

of total alkaloids or mixtures of alkaloids, was made in a number of countries according to a uniform programme established by a sub-commission, with the object of increasing the quantity of active principles extracted from cinchona bark and thus lowering the cost of treatment. This study has yielded quite satisfactory results, which will be communicated to the Health Administrations, about July 1931, after the Malaria Commission has obtained the views of experts on the standardisation of the products and on methods of control.

The solution of this important aspect of the treatment, will not however really solve the problem of the under-consumption of quinine which has been revealed by the studies carried out during the visits of the Malaria Commission to different countries.

On the proposal of its Malaria Commission the Health Committee has considered the question of convening the representatives of the Health Administrations of malarious countries, whether growers of cinchona or not. The object of this consultation would be to determine the actual quinine requirements in these countries, and to discuss methods of securing supplies of quinine at reduced prices for their benefit.

If you agree as to the value of holding such a meeting I should be very grateful if you would help in the preliminary work by supplying us in the course of the next three months with short information on the following points:

(1) Prevalence of malaria in your country (if possible, statistics for the 4 or 5 last years).

(2) Number of malaria cases treated annually (in dispensaries, in hospitals, through quinine distributors, etc.)

(3) Amount of quinine or secondary alkaloids of cinchona (cinchonine, cinchonidine, quinine, alkaloid mixtures: quinetum, chineto, cinchona febrifuge) imported into the

country:

country.

- (a) amount imported directly by the state.
- (b) amount bought in the market and distributed free of charge (figures for the last 10 years).
- (c) Legislation concerning Quinine.
- (4) Total amount of quinine or secondary alkaloids distributed annually by the Health Administration:
  - (a) quinine distributed gratuitously,
  - (b) quinine sold by the State at reduced prices.
- (5) Actual amount of quinine required annually by the Government to meet the needs of the country.

Any additional information or suggestions regarding the supply of quinine and its distribution will be greatly appreciated.

Yours truly,

(Sd) Frank G. Boudreau.

For Medical Director.

The Right Honourable the Secretary of State  
for India,  
India Office,  
London, S.W.1.

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True Copy.

*B. Sen Gupta*  
Superintendent, Issue Branch,  
Foreign and Political Department.

E.&.O.4147/32.

1(c)  
INDIA OFFICE,  
WHITEHALL,  
LONDON, S.W.1.

15th June 1932.

League of Nations. Malaria. Collection of  
information as to the prevalence of malaria  
and the requirements of quinine.  
-----

Sir,

With reference to correspondence resting with the  
letter from the Department of Education, Health and Lands  
No.I.H(General), dated 4th January 1932, I am directed  
to forward, for information and for such action as may  
be ~~XXXXXXXX~~ possible copy of the paper noted below.

I am, Sir,

Your obedient Servant,

Sd. W.H. Turner,  
for Secretary,

Economic and Overseas Department.

No.8C/27535/21313 dated 8th June 1932 from Secretary  
General, asking for similar information regarding  
certain Indian States.  
-----

The Secretary to the Government of India,  
Legislative Department.

True Copy.

*B. Sen Gupta*  
Superintendent, Issue Branch.  
Foreign and Political Department.

LEAGUE OF NATIONS,

No.80/27535/21313

SOCIETE DES NATIONS.

Geneva, June 8th 1932.

Sir,

With further reference to your letter No.E.&.O. 377/32, dated February 2nd 1932, concerning the prevalence of malaria in British India and the quantity of quinine required for its treatment, I have the honour to inform you that it would be much appreciated if similar information could be obtained in respect of the Indian States of the Central India Agency, Baluchistan, Mysore, Sikkim, Madras, Hyderabad and Rajputana.

The question of the world's quinine requirements is being closely studied by the League of Nations Malaria Commission which desires to obtain as complete data as possible on the subject. I should therefore be grateful for any particulars which you may be able to obtain from the States mentioned above.

I am, etc.,

(Sgd) Eric Drummond.

Secretary General.

The Under Secretary of State for India,  
Economic and Overseas Department,  
India Office, Whitehall, S.W.1.

-----  
True Copy.

*B. Sen Gupta*  
Superintendent, Issue Branch.  
Foreign and Political Department.

All Communications should be addressed to the Secretary to the Resident in Mysore, Bangalore, by designation and not by name.

No. 5865-42.4  
712-1931.

2

FROM

Captain G. Kirkbride, I.A.,

SECRETARY TO THE HON'BLE THE RESIDENT IN MYSORE.

To

The Chief Secretary to the Government of

His Highness the Maharaja of Mysore.

Dated, Bangalore, the

22<sup>nd</sup> Sept-  
August 1932.

Subject.

Collection of information as to the prevalence of malaria and the requirements of quinine.

SIR,

I am directed to forward a copy of the papers noted in the margin and to request that, if there be no objection, the Hon'ble the

S.N. 1/c Letter from the India Office, No. E. & O.422/31, ) Resident may kindly be  
dated the 29th January 1931, with enclosure. )  
S.N. 1/c Letter from the India Office, No. E. & O.4147/32, ) supplied as early as  
dated the 15th June, 1932, with enclosure. ) possible, for communication

to the Government of India, with such information as can be furnished on the points mentioned in the letter from the Medical Director, League of Nations, dated the 14th January 1931, so far as Mysore State is concerned.

I have the honour to be,

Sir,

Your most obedient servant,

for SECRETARY TO THE RESIDENT.

21/8/32

BJ

All Communications should be addressed to the Secretary to the Resident in Mysore, Bangalore, by designation and not by name.

No. 5866 E. 4  
712-1931.

FROM

Captain G. Kirkbride, I.A.,

SECRETARY TO THE HON'BLE THE RESIDENT IN MYSORE.

TO

The Collector & President, Municipal Commission,  
Civil and Military Station, Bangalore.  
The Residency Surgeon,  
Bangalore.

Dated, Bangalore, the

2<sup>nd</sup> Sept  
August 1932.

Subject.

Collection of information as to the prevalence of  
malaria and the requirements of quinine.

SIR,

I am directed to forward a copy of the papers noted in the  
margin and to request that the Hon'ble the Resident may kindly be

- 
- |                                                                                                 |   |                                 |
|-------------------------------------------------------------------------------------------------|---|---------------------------------|
| 1. Letter from the India Office, No.E & O. 422/31, dated the 29th January 1931, with enclosure. | ) | supplied as early as possible,  |
| 2. Letter from the India Office, No. E & O. 4147/32, dated the 15th June 1932, with enclosure.  | ) | for communication to the        |
|                                                                                                 | ) | Government of India, with such  |
|                                                                                                 | ) | information as can be furnished |
- 

on the points mentioned in the letter from the Medical Director,  
League of Nations, dated the 14th January 1931, so far as Civil and  
Military Station, Bangalore is concerned.

I have the honour to be,

Sir,

Your most obedient servant,

*o/c* *R. 24/8*  
for SECRETARY TO THE RESIDENT.

*B. 27/8/32*

No. lt. 64/32 CIVIL AND MILITARY STATION, BANGALORE.  
MUNICIPAL OFFICE.

DATED 26<sup>th</sup> September 1932.

From

G. H. COOKE, ESQ., M. C., I. C. S.,

President, Municipal Commission.

C. & M. Station, BANGALORE.

To

The Secretary to the Hon'ble the Resident in Mysore,  
Bangalore.

OFFICE OF THE RESIDENT IN MYSORE.  
BANGALORE.

28 SEPT. 1932

Regd. No. 8237

File No. 712/31

SIR,

Subject:- Collection of information as to the  
prevalence of malaria and the requirements  
of quinine.

-----

S.N. 23

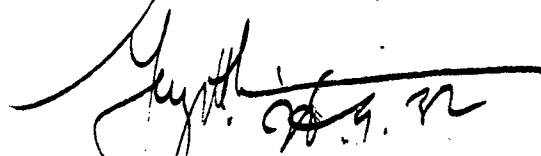
C

With reference to your letter No. 5866/712-1931 dated  
the 2nd September 1932, I have the honour to forward, herewith,  
a copy of a report by Dr. M. R. Goverdhan, Health Officer on the  
points mentioned in the letter from the Medical Director,  
League of Nations, dated the 14th January 1931, so far as the  
Civil and Military Station is concerned. Copies of the report  
on the "Malarial Survey of the Civil area of the Civil and  
Military Station, Bangalore" and the note on "Malaria in the  
Assigned Area, Bangalore" by Major G. Covell, I.M.S., Offg.  
Director Malarial Survey of India, are enclosed.

I have the honour to be,

Sir,

Your most obedient servant,

  
President, M. C.

MVL.

601  
.. 26 <sup>9</sup>/<sub>32</sub>

-----

President.

I am herewith submitting my remarks with reference to the information asked for.

(1) Prevalence of Malaria.

The incidence of Malaria in the Station is low. I am herewith attaching copies of the Malaria Survey of 1931 and the note of Major Covell, Director of Malaria Survey 1931, which give the necessary information.

(2) The number of malaria cases treated annually.

I am giving below the number of cases treated annually in the hospitals and dispensaries for the past five years. -

| <u>Year.</u> | <u>Inpatients.</u> | <u>Outpatients.</u> | <u>Total.</u> |
|--------------|--------------------|---------------------|---------------|
| 1927-28.     | 338                | 10,808              | 11,146.       |
| 1928-29.     | 345                | 8,505               | 8,850.        |
| 1929-30.     | 270                | 8,560               | 8,830.        |
| 1930-31.     | 226                | 11,441              | 11,667.       |
| 1931-32.     | 173                | 15,613              | 15,786.       |

The indoor cases treated at the hospital were definite cases of malaria and give a fair index about the malaria incidence. Regarding the outdoor cases it cannot be definitely stated that they were all malaria cases, as the diagnosis of all these was made at the <sup>dispensaries</sup> outpatients <sup>as to</sup>

(3). I am unable to give the figures ~~about~~ the quantity of quinine or secondary alkaloids of cinchona imported into the Station. To get the correct figures, the information will have to be collected from all the public and private dispensaries, hospitals and chemists in the Station. Even then we may not be able to get correct figures, as a number of private individuals get their supply from City.

(4). The Health Administration does not distribute

quinine

quinine or secondary alkaloids in the Station. We buy about 85 to 90 lbs. of quinine for the four Municipal dispensaries annually for free distribution.

(5). It is difficult to estimate the actual amount of quinine and alkaloids of cinchona required for the needs of the Station. It can however be roughly calculated as follows:- Each case if given a full course of treatment for proper prevention and eradication of malaria would require over half an ounce of quinine. But in practice it is found that the average consumption of quinine per patient is much less i.e., about 8 to 10 cases per ounce of quinine.

I have discussed the above with the Residency Surgeon and the Senior Medical Officer Military. They agree with my remarks.

-----  
" Copy. "

*DeShan*  
26/9/32

MVL.

MALARIA SURVEY OF THE CIVIL AREA OF THE CIVIL AND MILITARY  
STATION OF BANGALORE.

-:-

Malaria survey of the civil area of the Civil and Military Station, Bangalore, was undertaken. School children under 12 years of age were examined for enlargement of spleens in the municipal schools, in different sections of the area. Anopheline larvae from some of the possible breeding areas were collected and indentified.

800 children from the schools were examined and it was found that only 5 had splenic enlargement giving a spleen rate of 0.6%. It may be mentioned here that out of the 5 with enlarged spleens, 2 had size 2 spleens and were recent arrivals from Shimoga. If these two are left out of consideration, the spleen index for indigenous malaria would be 0.4%.

Blood smears were also taken from every fourth child examined for splenic enlargement and the result of the examination of smears from the schools 1 and 8 are noted in table below.

TABLE I.

| Name of school.            | No. of children. |         | No. of Enlarged spleen. |   |   | No. of blood smears taken for examination. | Number positive. | Species of parasites. |
|----------------------------|------------------|---------|-------------------------|---|---|--------------------------------------------|------------------|-----------------------|
|                            | Male             | Female. | Palpable                | 1 | 2 |                                            |                  |                       |
| 1 Blackpally school        | 106              | .       | .                       | . | . | 25                                         | 1                | B.T.                  |
| 2 Cole's Rd. school        | 59               | 22      | .                       | . | . | 20                                         |                  |                       |
| 3 Cox Town school          | 77               | .       | 1                       | . | . | 19                                         |                  |                       |
| 4 Ulsoor school            | 93               | .       | .                       | . | . | 23                                         |                  |                       |
| 5 Shoolay school           | 89               | 7       | .                       | 1 | . | 25                                         |                  |                       |
| 6 Ookadapalya school       | 107              | .       | .                       | . | . | 26                                         | 2                | B.T.                  |
| 7 Old Poor House Rd School | 91               | .       | .                       | . | . | 21                                         |                  |                       |
| 8 Latheefia school         | 87               | .       | .                       | . | 2 | 21                                         |                  |                       |
| 9 Nilsundra Mohdn. school  | 62               | .       | .                       | 1 | . | 15                                         |                  |                       |
| Total                      | 771              | 29      | 1                       | 2 | 2 | 193                                        |                  |                       |
| Grand total                | 800              |         | 5                       |   |   | Spleen rate 0.6%                           |                  |                       |

L A R V A E.

A few of the possible breeding areas were examined for anopheline larvae as only a general idea of the intensity and the different anopheline species breeding, was required.

W E L L S.

A number of wells in (1) Ulsoor (2) Shoolay and (3) Old Poor House road surroundings were examined. It was observed that the water level in most of the wells was only a few feet from the ground. *A. stephensi* in small numbers were found in a few wells in areas 2 and 3, whereas in Ulsoor most of the wells were found to have *A. stephensi* larvae in fairly large numbers.

T A N K S.

Of the three tanks (Miller's Tanks, Shoolay Tank and the Ulsoor Tank) it was found that the Ulsoor tank and Shoolay tank had very few anopheline larvae. Both these tanks appear ideal breeding places for anopheline as there is plenty of vertical vegetation in both and specially in the Ulsoor tank which is virtually covered with vegetation vertical and floating. It was gathered that the Shoolay tank was regularly being oiled and this may perhaps explain the absence of larvae here, whereas the absence of sufficient number in the Ulsoor tank is hard to explain.

The Miller's tank is cut up into the tank proper and two small collections of water. The main tank was quite free from anopheline larvae at the time of the survey. This is very likely due to the absence of any sort of vegetation at the margins and heavy

wave action due to winds. Of the two other collections of water the one to the north of the intersecting road is mainly marshy and a few anopheline larvae were found. Table II below gives the species of anophelines found in these areas.

TABLE II.

| Type of Breed-<br>ing places. | A.stephensi. | A.culicifacies. | A.pallidus. | A.fuligino-<br>sus | A.sub-<br>pictus. |
|-------------------------------|--------------|-----------------|-------------|--------------------|-------------------|
| T a n k s                     | -            | +               | +           | +                  | +                 |
| W e l l s                     | +            | -               | -           | -                  | -                 |

C o n c l u s i o n .

1. The civil area in Bangalore Cantonment has a spleen rate of 0.6%.
2. Two of the principal carrier species A.stephensi and A.culicifacies were recognised, A.stephensi exclusively in wells.

NOTE ON MALARIA IN THE ASSIGNED AREA, BANGALORE, 1931.

-----

By Major G.Covell, I.M.S., Offg. Director, Malaria Survey  
of India.

---

A brief visit was paid to the Assigned Area on November 7th, 1931, in company with the Health Officer of the Area. As far as can be ascertained from the records available, malaria has never been very severe in this area, though from time to time there have been a considerable number of cases among the troops, notably in the latter years of the Great War. In 1919, Captain M.Ghosh, I.M.S., made a survey of the Station, and found the pooled splenic index (20,195 observations) to be less than 2, though there was one area, Mariappanpolya, on the northern border of the Station which yielded a splenic index of 35, and Byadarhalli Lines in that vicinity had a bad reputation for malaria.

At the present time according to observations made by Dr. Ananthaswamy Rao, Mysore State Health Department, the splenic index in the area is very low, and malaria on the whole is slight. At the same time, A.stephensi, a dangerous malaria carrier, is breeding freely in the wells. It is therefore probable that, should circumstances at any time become particularly favourable for transmission e.g., should a number of highly infected troops be brought into the Station, a considerable epidemic of malaria might ensue.

In Bangalore City excellent results are being produced by stocking the wells with Gambusia, a species of fish which preys on anopheline larvae. Dr. Sweet, Consultant in Health, Mysore State, has kindly offered to supply this species of fish for stocking the wells in the Assigned Area. I would strongly advise that advantage be taken of this offer, and that Gambusia be introduced not only into the wells, but

also into the tanks in the Area. One small tank might be used as a hatchery for the fish.

As food for the fish in the wells is limited, they are liable to eat their own young, and it is necessary to re-stock the wells at least once, preferably twice a year. It is suggested that 6 fish be put into each well on January 1st, and 6 more on June 1st each year. This would prove an efficient means of controlling the chief breeding places of *A. stephensi*. A most necessary preliminary step is a complete and careful census of the wells. The best procedure is to paint a number on each well. If this is not done, some wells will inevitably be missed out. Corresponding numbers should be entered on a spot map of the Area.

Seeing that malaria incidence is so low, there is no justification at present for the expenditure of large sums of money on antimosquito measures. It is well however to bear in mind the most dangerous breeding places (other than wells) in case there should at any time be an outbreak of malaria. These are specially seepages from tanks, seepage pools or fresh rain pools in quarries, and rain-pools in nullahs. These may then be treated with oil or paris green.

K A S A U L I

Dated the 7th January 1932.

Sd/ G. COVELL,

Major, I.M.S.,  
Offg. Director,  
Malaria Survey of India.

AMJ.  
21/9/32.

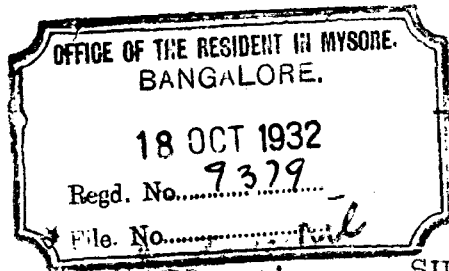
cc. No. 1534/143  
17/11

Residency Surgeon's Office  
Bowring Civil Hospital  
Bangalore 14th. Octr. 1932

From

Bt-Col. J. McPherson, M.A., M.B., F.R.C.S.E., M.R.C.P.,  
I.M.S.,  
Residency Surgeon.

To



The Secretary

to the Resident in Mysore,

B a n g a l o r e.

SUBJECT:-

Collection of information as to the prevalence of malaria and the requirements of quinine.

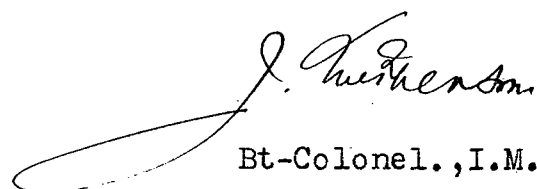
S i r,

S.N. 73  
C  
With reference to your letter No. 5866/712-1931, dated the 2nd. September 1932, I have the honour to state that the Health Officer, a member of the Malarial Committee who has been entrusted by that Committee to collect the information required, and has consulted me in certain matters before putting the result on paper, has now furnished his report through the President, Municipal Commission. I have nothing to add to that report which may therefore kindly be accepted as the expression of opinion of my Committee.

I have the honour to be

Sir,

Your most obedient servant,

  
Bt-Colonel., I.M.S.,  
Residency Surgeon, Bangalore.

6  
E A  
211/

GOVERNMENT OF HIS HIGHNESS THE MAHARAJA/OF MYSORE

General and Revenue Secretariat

Dated, Bangalore, 29th Octr. 1932  
2-11-32.

No. Pol. 440 Epou

From P.H. 36-32-4

R. Ranga Rao, Esq., B.A., B.L.,

~~The~~ Secretary to the Government of His Highness  
the Maharaja of Mysore.

To

The Secretary to the Hon'ble the Resident in Mysore.

Sir,

S.N. & 2  
B  
Reminders  
(1-1 put-f)

As desired in your letters No. 5865/712-1931,  
dated 2nd September 1932 and No. 6759/712-1931, dated  
6th October 1932, about the collection of information  
as to the prevalence of Malaria and the requirements  
of quinine in the State, I am directed to forward here-  
with a copy of letter No. G.C. 85-3, dated 5th October  
1932, from the Senior Surgeon in Mysore with a copy of  
its enclosure~~s~~ furnishing the information required.

OFFICE OF THE RESIDENT IN MYSORE.  
BANGALORE.

3- NOV. 1932

Regd. No. 9873

File. No. 3-11-32-11-32

TRM. 2

I have the honor to be,  
Sir,  
Your most obedient servant,

R. Ranga Rao

General Secretary to Government

1-11-32

Letter No. G.C.. 85-3, dated 5th October 1932, from the Senior Surgeon in Mysore, to the General Secretary to Government of Mysore Bangalore.

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With reference to your letter No. G. 1816/P.H. 36-32-2, dated the 9th September 1932, I have the honour to furnish the following information on the subject of the prevalence of Malaria and the requirements of quinine in the State:-

(1) Prevalence of Malaria in Mysore.- Except in the Bangalore and Mysore Cities and the Kolar Gold Field, deaths from malaria are not registered under a separate distinct heading. The accompanying statement "A" shows that the registered deaths from "fevers" average 38,958 annually, with a ratio of 6.43 per mille of population. The Director of Health notes that it may safely be assumed that 75 per cent of the recorded number of deaths from "fevers" are due to Malaria. Statement "B" shows the recorded deaths from malaria in the Mysore and Bangalore Cities and the Kolar Gold Field, for the past five years.

(2) The number of malaria cases treated annually in Dispensaries and Hospitals is shown by Districts in the Statement "C" appended.

(3) Amount of quinine, etc., imported into the country:

(a) By the State Medical Department - About 2,500 lbs of quinine and 500 lbs. of cinchona febrifuge;

(b) By Private Practitioners and Druggists Stores:  
No statistics are available but it is estimated that about 1000 lbs. of quinine is imported every year by these agencies for sale to the public.

(4) Total amount of quinine distributed by the Health - - Department: Nil. Quinine is distributed to the public only through the Government Hospitals and Dispensaries. In the case of villages where malaria is endemic or epidemic, the Medical Officer of the nearest Dispensary visits the places and dispense of quinine.

No quinine is sold by the State either at cost price or at reduced prices.

There is no legislation in lysore concerning quinine.

-----  
C O P Y.

*R. Devablan*  
For General Secretary to Government.

*dy*

STATEMENT "A"

Statement showing the recorded deaths from fevers in each district for the past five years.

| District.   | in 1927. | 1928. | 1929. | 1930.  | 1931. | Average deaths<br>for<br>five years. | Average deaths per<br>mille of population<br>for 5 years. |
|-------------|----------|-------|-------|--------|-------|--------------------------------------|-----------------------------------------------------------|
| Bangalore.  | 4,099    | 5,385 | 3,778 | 4,073  | 3,960 | 4259                                 | 4.7                                                       |
| Mysore.     | 9,148    | 9,421 | 6,226 | 7,610  | 9,053 | 8292                                 | 5.9                                                       |
| Hassan.     | 4,934    | 6,086 | 4,147 | 4,238  | 4,182 | 4717                                 | 7.9                                                       |
| Kadur.      | 4,016    | 4,265 | 3,014 | 2,978  | 3,784 | 3611                                 | 10.3                                                      |
| Shimoga.    | 5,114    | 5,339 | 3,945 | 3,722  | 3,349 | 4294                                 | 8.3                                                       |
| Chitaldrug. | 3,237    | 3,609 | 4,181 | 3,626  | 3,825 | 3696                                 | 5.6                                                       |
| Tumkur      | 4,957    | 5,879 | 4,282 | 4,257  | 5,576 | 4990                                 | 5.7                                                       |
| Kolar       | 4,697    | 5,139 | 4,080 | 4,658  | 6,670 | 5049                                 | 6.6                                                       |
|             |          |       |       |        |       | 38,958                               | 6.43                                                      |
|             |          |       |       | Total. |       |                                      |                                                           |

C O P Y.

*R. Venabalan*

For General Secretary to Government.

*Weg*

Statement "B"

Statement showing the recorded deaths from Malaria for the past five years.

| Places.           | in 1927. | 1928. | 1929. | 1930. | 1931.  | Average deaths<br>for<br>five years. | Average deaths<br>per mille of<br>population for<br>5 years. |
|-------------------|----------|-------|-------|-------|--------|--------------------------------------|--------------------------------------------------------------|
| Mysore. & City.   | 117.     | 111.  | 96.   | 201.  | 178.   | 141.0                                | 1.3                                                          |
| Bangalore City.   | 376.     | 562.  | 589.  | 194.  | 74.    | 359.0                                | 2.08                                                         |
| Kolar Gold Field. | 49.      | 18.   | 133.  | 10    | 164    | 75.0                                 | .88                                                          |
|                   |          |       |       |       | Total. | 575.                                 | 1.57                                                         |

Statement "C".

Number of patients treated annually for Malaria in Hospitals and dispensaries in the State.

| District.   | Average for the year ending 1931. |     |     |        |         |
|-------------|-----------------------------------|-----|-----|--------|---------|
| Bangalore.  | ...                               | ... | ... | ...    | 45,610  |
| Kolar.      | ...                               | ... | ... | ...    | 37,346  |
| Tumkur      | ...                               | ... | ... | ...    | 29,431  |
| Mysore.     | ...                               | ... | ... | ...    | 132,570 |
| Hassan.     | ...                               | ... | ... | ...    | 86,870  |
| Kadur.      | ...                               | ... | ... | ...    | 100,530 |
| Shimoga.    | ...                               | ... | ... | ...    | 123,581 |
| Chitaldrug. | ...                               | ... | ... | ...    | 22,931. |
|             |                                   |     |     | Total. | 578,869 |

C O P Y.

*R. Devadasi*

For General Secretary to Government.

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From

The Hon'ble Lieut. Colonel R. J. C. Burke,  
Resident in Mysore,

To

The Political Secretary to the Government of India,  
Foreign and Political Department.

Dated Bangalore the 19th November, 1932.

SUBJECT: Collection of information as to the  
prevalence of malaria and the require-  
ments of quinine.

Sir,

With reference to Captain Edward's letter No. D.1958-G/32  
dated the 8th August, 1932, on the above subject, I have the

honour to forward a  
copy of the letters  
noted on the margin,  
which contain the in-  
formation asked for,  
as far as Mysore State  
and the Civil and  
Military Station,

- (1) Letter No. G.C.85-3, dated the 5th  
Octr. 1932, from the Senior Surgeon  
to the Government of Mysore, with  
enclosures.
- (2) Letter No. Gt.64/32, dated the 26th  
September, 1932, from the President  
Municipal Commission, Civil and  
Military Station, Bangalore, with  
enclosures.

Bangalore are concerned.

I have the honour to be,

Sir,

Your most obedient servant,

*% (for signature)*  


Lieut. Colonel,  
R E S I D E N T.

EnA  
18/11/32